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PURE UTERINE LIPOMA : A RARITY

Pathology

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ABSTRACT

Uterine fatty tumors are highly uncommon and amongst them Pure lipomas of the uterus are definitely rare entities. Uterine lipomas have distinctive radiological and histopathological characteristics with excellent prognosis .We present a case of 60year old female patientpresenting with dull aching abdominal pain for last 6 months .Clinically and radiologically diagnosed as leiomyoma, on histopathology was found to be a Pure lipoma of the uterus.

KEYWORDS

lipoma, uterus, histogenesis

INTRODUCTION

Lipomas are the most common mesenchymal benign tumours composed of mature fat, however occurrence of Lipomas in the uterine smooth muscle is a rare finding.The incidence of uterine fatty tumors varies from 0.03-0.2%.[1]. Despite of characteristic radiological appearance of adipose tissue, Lipomas of the uterus are confused with variety of other uterine neoplasms and definitive diagnosis is made only on histopathological examination.

CASE REPORT

A 60 year old postmenopausal female, a known case of hypertension, attended the gynecology OPD with complaints of dull aching abdominal pain since 6 months.All routine investigations were found to be within normal limits. Ultrasonography of Abdomen and Pelvis revealed a well definedhyperechoic mass lesion of 7 x 7 cm in the uterine corpus, suggestive of Leiomyoma.

We received a specimen labelled as Total abdominal hysterectomy with bilateral salpingo-oophorectomy. On gross examination, we found a bulky globular tissue identified as uterus measuring 10 × 10 × 6cms.Cut section through the body of the uterus showed anintramural well circumscribed yellow mass measuring 8 × 7 cm compressing the endometrial cavity with thin rim of the myometriumat the periphery . No areas of hemorrhage or necrosis were seen [Figure 1a]. Cervix, Bilateral tubes and ovaries were sent separately and were unremarkable.

Microscopic examination revealed a benign tumor composed of mature adipocytes separated by thin fibrovascularseptae.[Figure 1b]. Myometrium was unremarkable. Endometrium showed atrophic changes. Cervix, both tubes and ovaries too, were unremarkable.

On the basis of typical histopathological features, a diagnosis of pure uterine lipoma was made.

DISCUSSION

Uterine fatty lesions continue to arouse great interest because of their rareoccurrence and unknown histogenesis.[2]. Since first description by Lobstein in 1816 until 1966 only 131 cases of lipomatous uterine tumors were initially reported[3].

lkonomou (1947) in his publication on fat tissue tumors of the uterus distinguished three categories.The first he named 'pure lipomas', these tumors are composed of only fat cells.The second group includes those with the addition of some fibromatous or myomatoustissue. The third group "immaturelipomas" belongs to liposarcomas of theuterus.[4]However, According to D.J. Pounder , the diagnosis of pure lipoma of the uterus should only be madewhen any smooth muscle cells present, are confined to the periphery of the tumor.[5]

Lipomatous uterine tumors primarily occur in postmenopausal women. They are uncommon. Their frequency of occurrence ranges between 0.001%and 2.1%.[2]

Pure lipomas are well encapsulated tumors showingmature adipocytes interspersed by thin fibrous septae. Myometrium is thinned out with few fibers of smooth muscle cells at the periphery of the tumor.Histopathological diagnosis is mandatory and definitive ,however few case studies with preoperative radiological diagnosis have been observed.

Histolopathologically, three types of uterine tumors with lipomatous component are seen: a) Pure lipoma consisting of adipocytes and very few scattered smooth musle cells, b)Lipoleiomyoma with a variable amount and distribution of adipocytes and smooth muscle cells,c) Angiomyolipoma with prominent vascular structures admixed with adipoytes and smoothmuscle cells.[6]

Differential diagnosis includes mature ovarian teratoma, malignant degeneration of benign immature teratoma, non-teratomatouslipomatous ovarian tumor, pelvic lipoma, pelvic liposarcoma, very rare lipomatous tumors of the uterus, angiomyolipoma, fibromyolipoma and myelolipoma.[7]

The origin of lipomatous lesion of uterus has been subject of much speculation. In the past, they were reported as hamartomas or more appropriately, choristomas.[8]

Sieinksi summarized the different proposed theories in: (1) Misplaced embryonal mesodermal rests with a potential for lipoblastic differentiation. (2) Lipoblast or pluripotential cells migrating along uterine arteries and nerves. (3) Adipose metaplasia of stromal or smooth muscle cells in leiomyoma.[6]

Sosniketal in their study indicated that Pure lipomas may arise from misplaced lipoblasts and the process of fatty metamorphosis is gradual. In the fully developed uterine lipoma, it is difficult to state whether the lesion originally arose in a leiomyoma and eventually replaced itcompletely, or developed de novo in the myometrium.[2]

Studies by Bolat et al revealed that the histological and immunohistochemical findingssuggest a complex histogenesis for these tumors, in that they might arise from mesencyhmalimmature cells or from direct transformation of smooth muscle cells into adipocytes by means of progressive intracellular storage of lipids.[6]

Studies suggest that a number of various lipid metabolic disorders or other associated conditions, which are associated with estrogen deficiency as occurs in peri or post menopausal period, possibly promote abnormal intracellular storage of lipids.[9]

However, definite consensus on histogenesis of Purelipoma of the uterus remains a conundrum. More studies emphasizing on histogenesis using novel immunohistochemical researches are needed to decipher its uncertain histogenesis.

Aggarwal et al reviewed 16 cases of pure uterine lipoma reported in English Literature and reported a case of pure uterine lipoma presenting as polyp.[10]

Some of the pure lipomas are co-incidentally associated with other lesions. Dey and Dhar in reported a case of uterine lipoma in association with strumaovarii, DiGesu'G et al. found pure uterine lipoma with endometrial carcinoma and Dilek TU reported a case of pure uterine lipoma with cervical carcinoma.[11]However, except in cases associated with malignancies their prognosis is excellent.

To conclude, Pure lipomas are extremely rare benign tumours of the uterus.They may attain large sizes and due to preponderance in postmenopausal females may be mistaken for malignancy. So, differential diagnosis of Pure uterine lipomas must be kept in mind while evaluating uterine masses in elderly females.

IMAGES

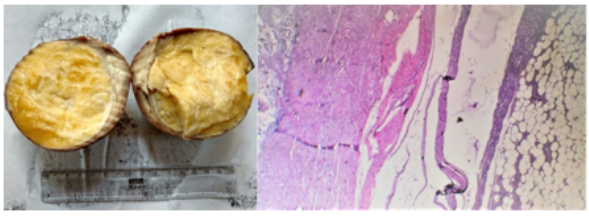

Figure 1(a). Gross photograph: Cut section through the body of the uterus showing an intramural well circumscribed yellow mass compressing the endometrial cavity.(b) Microphotograph showing atrophic endometrial glands with thin rim of myometrium compressed by capsulated mass composed of mature adipocytes separated by thin fibrovascularseptae.(HE, 100X)

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